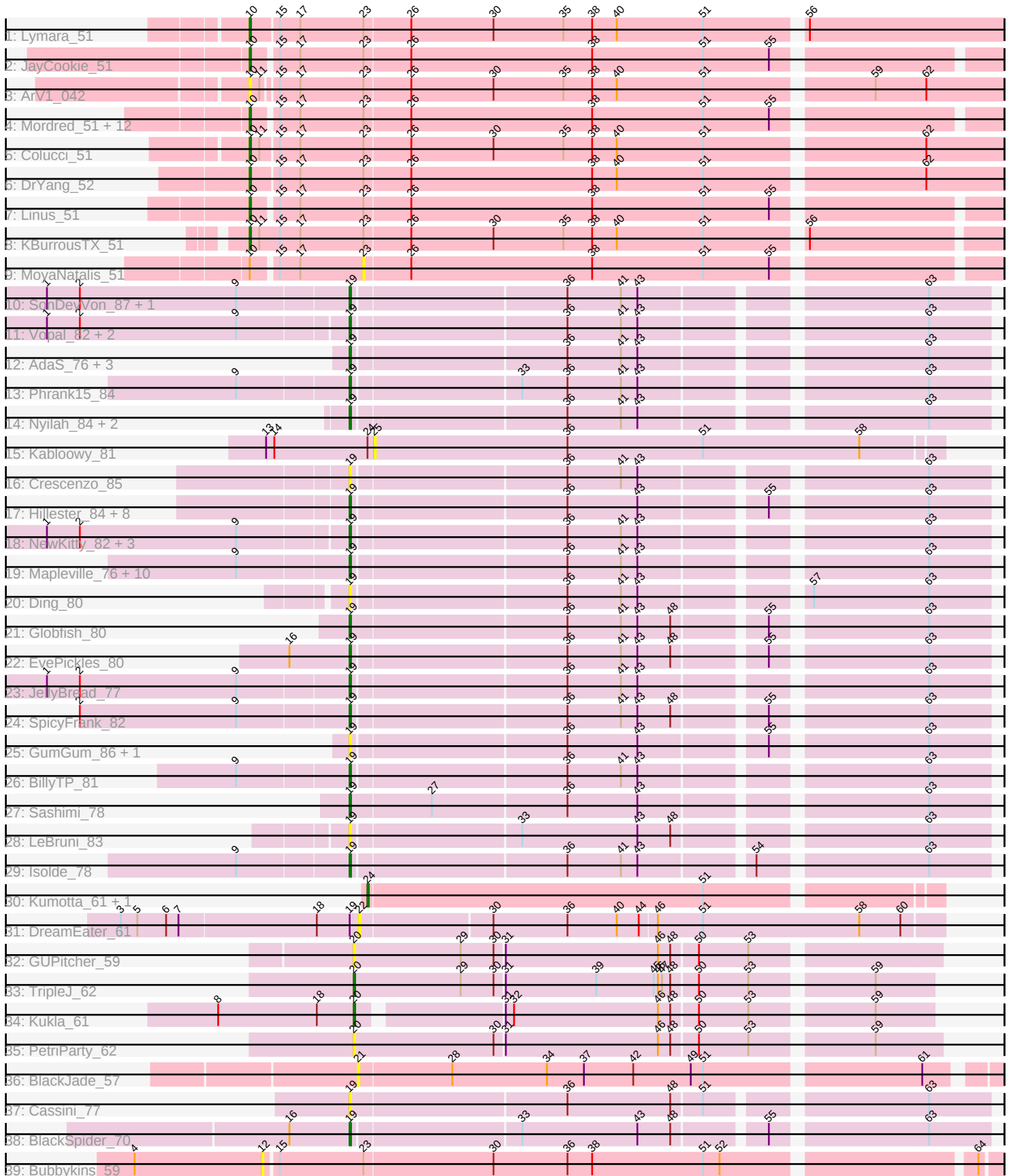


Pham 271507



Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 271507 Report

This analysis was run 02/07/26 on database version 634.

Pham number 271507 has 82 members, 27 are drafts.

Phages represented in each track:

- Track 1 : Lymara_51
- Track 2 : JayCookie_51
- Track 3 : ArV1_042
- Track 4 : Mordred_51, Chipper1996_510, PrincessTrina_51, JaNo_51, RosiePosie_51, Tophat_51, EdgarPoe_51, Conboy_51, Kabreeze_51, Chocolat_51, Scavito_51, Chubster_51, HumptyDumpty_51
- Track 5 : Colucci_51
- Track 6 : DrYang_52
- Track 7 : Linus_51
- Track 8 : KBurrousTX_51
- Track 9 : MoyaNatalis_51
- Track 10 : SonDevVon_87, Richie_83
- Track 11 : Vopal_82, Hestia_74, Faja_83
- Track 12 : AdaS_76, MidnightRain_86, Lasker_83, CosmicBrownie_78
- Track 13 : Phrank15_84
- Track 14 : Nyilah_84, Tiff81_76, Anekin_82
- Track 15 : Kabloowy_81
- Track 16 : Crescenzo_85
- Track 17 : Hillester_84, DarwinJr_85, BenchScraper_80, RadFad_85, Bhageatrice_84, BasketStar_80, Auxilium_78, Seahorse_88, Satrap_80
- Track 18 : NewKitty_82, Sporco_82, Gorpy_78, Sakai_77
- Track 19 : Mapleville_76, Aikyam_79, YoungHarleezy_80, MaterMagnus_80, BlueShadow_78, Windest_84, Raphaella_81, MUWow_83, Raqqa_78, CookieBear_79, Lawnathon_82
- Track 20 : Ding_80
- Track 21 : Globfish_80
- Track 22 : EvePickles_80
- Track 23 : JellyBread_77
- Track 24 : SpicyFrank_82
- Track 25 : GumGum_86, MurphyJoseph_77
- Track 26 : BillyTP_81
- Track 27 : Sashimi_78
- Track 28 : LeBruni_83
- Track 29 : Isolde_78
- Track 30 : Kumotta_61, MargaretKali_57
- Track 31 : DreamEater_61
- Track 32 : GUPitcher_59

- Track 33 : TripleJ_62
- Track 34 : Kukla_61
- Track 35 : PetriParty_62
- Track 36 : BlackJade_57
- Track 37 : Cassini_77
- Track 38 : BlackSpider_70
- Track 39 : Bubbykins_59

Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 19, it was called in 32 of the 55 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AdaS_76, Aikyam_79, Anekin_82, Auxilium_78, BasketStar_80, BenchScraper_80, Bhageatrice_84, BillyTP_81, BlackSpider_70, BlueShadow_78, Cassini_77, CookieBear_79, CosmicBrownie_78, Crescenzo_85, DarwinJr_85, Ding_80, EvePickles_80, Faja_83, Globfish_80, Gorpy_78, GumGum_86, Hestia_74, Hillester_84, Isolde_78, JellyBread_77, Lasker_83, Lawnathon_82, LeBruni_83, MUWow_83, Mapleville_76, MaterMagnus_80, MidnightRain_86, MurphyJoseph_77, NewKitty_82, Nyilah_84, Phrank15_84, RadFad_85, Raphaella_81, Raqqa_78, Richie_83, Sakai_77, Sashimi_78, Satrap_80, Seahorse_88, SonDevVon_87, SpicyFrank_82, Sporco_82, Tiff81_76, Vopal_82, Windest_84, YoungHarleezy_80,

Genes that have the "Most Annotated" start but do not call it:

- DreamEater_61,

Genes that do not have the "Most Annotated" start:

- ArV1_042, BlackJade_57, Bubbykins_59, Chipper1996_510, Chocolat_51, Chubster_51, Colucci_51, Conboy_51, DrYang_52, EdgarPoe_51, GUPitcher_59, HumptyDumpty_51, JaNo_51, JayCookie_51, KBurrousTX_51, Kabloowy_81, Kabreeze_51, Kukla_61, Kumotta_61, Linus_51, Lymara_51, MargaretKali_57, Mordred_51, MoyaNatalis_51, PetriParty_62, PrincessTrina_51, RosiePosie_51, Scavito_51, Tophat_51, TripleJ_62,

Summary by start number:

Start 10:

- Found in 21 of 82 (25.6%) of genes in pham
- Manual Annotations of this start: 19 of 55
- Called 95.2% of time when present
- Phage (with cluster) where this start called: ArV1_042 (AR), Chipper1996_510 (AR), Chocolat_51 (AR), Chubster_51 (AR), Colucci_51 (AR), Conboy_51 (AR), DrYang_52 (AR), EdgarPoe_51 (AR), HumptyDumpty_51 (AR), JaNo_51 (AR), JayCookie_51 (AR), KBurrousTX_51 (AR), Kabreeze_51 (AR), Linus_51 (AR), Lymara_51 (AR), Mordred_51 (AR), PrincessTrina_51 (AR), RosiePosie_51 (AR), Scavito_51 (AR), Tophat_51 (AR),

Start 12:

- Found in 1 of 82 (1.2%) of genes in pham

- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bubbykins_59 (UNK),

Start 19:

- Found in 52 of 82 (63.4%) of genes in pham
- Manual Annotations of this start: 32 of 55
- Called 98.1% of time when present
- Phage (with cluster) where this start called: AdaS_76 (AY), Aikyam_79 (AY), Anekin_82 (AY), Auxilium_78 (AY), BasketStar_80 (AY), BenchScraper_80 (AY), Bhageatrice_84 (AY), BillyTP_81 (AY), BlackSpider_70 (FN), BlueShadow_78 (AY), Cassini_77 (FN), CookieBear_79 (AY), CosmicBrownie_78 (AY), Crescenzo_85 (AY), DarwinJr_85 (AY), Ding_80 (AY), EvePickles_80 (AY), Faja_83 (AY), Globfish_80 (AY), Gorpy_78 (AY), GumGum_86 (AY), Hestia_74 (AY), Hillester_84 (AY), Isolde_78 (AY), JellyBread_77 (AY), Lasker_83 (AY), Lawnathon_82 (AY), LeBruni_83 (AY), MUWow_83 (AY), Mapleville_76 (AY), MaterMagnus_80 (AY), MidnightRain_86 (AY), MurphyJoseph_77 (AY), NewKitty_82 (AY), Nyilah_84 (AY), Phrank15_84 (AY), RadFad_85 (AY), Raphaella_81 (AY), Raqqa_78 (AY), Richie_83 (AY), Sakai_77 (AY), Sashimi_78 (AY), Satrap_80 (AY), Seahorse_88 (AY), SonDevVon_87 (AY), SpicyFrank_82 (AY), Sporco_82 (AY), Tiff81_76 (AY), Vopal_82 (AY), Windest_84 (AY), YoungHarleezy_80 (AY),

Start 20:

- Found in 4 of 82 (4.9%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GUPitcher_59 (FJ), Kukla_61 (FJ), PetriParty_62 (FJ), TripleJ_62 (FJ),

Start 21:

- Found in 1 of 82 (1.2%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlackJade_57 (FL),

Start 22:

- Found in 1 of 82 (1.2%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DreamEater_61 (FJ),

Start 23:

- Found in 22 of 82 (26.8%) of genes in pham
- No Manual Annotations of this start.
- Called 4.5% of time when present
- Phage (with cluster) where this start called: MoyaNatalis_51 (AR),

Start 24:

- Found in 3 of 82 (3.7%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Kumotta_61 (FB), MargaretKali_57 (FB),

Start 25:

- Found in 1 of 82 (1.2%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kabloowy_81 (AY),

Summary by clusters:

There are 7 clusters represented in this pham: FB, AR, AY, FJ, UNK, FL, FN,

Info for manual annotations of cluster AR:

- Start number 10 was manually annotated 19 times for cluster AR.

Info for manual annotations of cluster AY:

- Start number 19 was manually annotated 31 times for cluster AY.

Info for manual annotations of cluster FB:

- Start number 24 was manually annotated 2 times for cluster FB.

Info for manual annotations of cluster FJ:

- Start number 20 was manually annotated 2 times for cluster FJ.

Info for manual annotations of cluster FN:

- Start number 19 was manually annotated 1 time for cluster FN.

Gene Information:

Gene: AdaS_76 Start: 43281, Stop: 43715, Start Num: 19

Candidate Starts for AdaS_76:

(Start: 19 @43281 has 32 MA's), (36, 43431), (41, 43470), (43, 43482), (63, 43671),

Gene: Aikyam_79 Start: 43854, Stop: 44288, Start Num: 19

Candidate Starts for Aikyam_79:

(9, 43776), (Start: 19 @43854 has 32 MA's), (36, 44004), (41, 44043), (43, 44055), (63, 44244),

Gene: Anekin_82 Start: 46598, Stop: 47032, Start Num: 19

Candidate Starts for Anekin_82:

(Start: 19 @46598 has 32 MA's), (36, 46748), (41, 46787), (43, 46799), (63, 46988),

Gene: ArV1_042 Start: 37634, Stop: 38161, Start Num: 10

Candidate Starts for ArV1_042:

(Start: 10 @37634 has 19 MA's), (11, 37640), (15, 37649), (17, 37664), (23, 37709), (26, 37742), (30, 37802), (35, 37853), (38, 37874), (40, 37892), (51, 37955), (59, 38069), (62, 38105),

Gene: Auxilium_78 Start: 43540, Stop: 43974, Start Num: 19

Candidate Starts for Auxilium_78:

(Start: 19 @43540 has 32 MA's), (36, 43690), (43, 43741), (55, 43825), (63, 43930),

Gene: BasketStar_80 Start: 46212, Stop: 46646, Start Num: 19

Candidate Starts for BasketStar_80:

(Start: 19 @46212 has 32 MA's), (36, 46362), (43, 46413), (55, 46497), (63, 46602),

Gene: BenchScraper_80 Start: 44453, Stop: 44887, Start Num: 19

Candidate Starts for BenchScraper_80:

(Start: 19 @44453 has 32 MA's), (36, 44603), (43, 44654), (55, 44738), (63, 44843),

Gene: Bhageatrice_84 Start: 48381, Stop: 48815, Start Num: 19

Candidate Starts for Bhageatrice_84:

(Start: 19 @48381 has 32 MA's), (36, 48531), (43, 48582), (55, 48666), (63, 48771),

Gene: BillyTP_81 Start: 46444, Stop: 46878, Start Num: 19

Candidate Starts for BillyTP_81:

(9, 46366), (Start: 19 @46444 has 32 MA's), (36, 46594), (41, 46633), (43, 46645), (63, 46834),

Gene: BlackJade_57 Start: 36087, Stop: 36527, Start Num: 21

Candidate Starts for BlackJade_57:

(21, 36087), (28, 36153), (34, 36222), (37, 36249), (42, 36285), (49, 36327), (51, 36336), (61, 36483),

Gene: BlackSpider_70 Start: 43372, Stop: 43806, Start Num: 19

Candidate Starts for BlackSpider_70:

(16, 43330), (Start: 19 @43372 has 32 MA's), (33, 43489), (43, 43573), (48, 43597), (55, 43657), (63, 43762),

Gene: BlueShadow_78 Start: 45699, Stop: 46133, Start Num: 19

Candidate Starts for BlueShadow_78:

(9, 45621), (Start: 19 @45699 has 32 MA's), (36, 45849), (41, 45888), (43, 45900), (63, 46089),

Gene: Bubbykins_59 Start: 44007, Stop: 44516, Start Num: 12

Candidate Starts for Bubbykins_59:

(4, 43914), (12, 44007), (15, 44016), (23, 44076), (30, 44169), (36, 44223), (38, 44241), (51, 44322), (52, 44334), (64, 44502),

Gene: Cassini_77 Start: 45232, Stop: 45669, Start Num: 19

Candidate Starts for Cassini_77:

(Start: 19 @45232 has 32 MA's), (36, 45385), (48, 45460), (51, 45481), (63, 45625),

Gene: Chipper1996_510 Start: 39219, Stop: 39737, Start Num: 10

Candidate Starts for Chipper1996_510:

(Start: 10 @39219 has 19 MA's), (15, 39234), (17, 39249), (23, 39294), (26, 39327), (38, 39459), (51, 39540), (55, 39588),

Gene: Chocolat_51 Start: 39199, Stop: 39717, Start Num: 10

Candidate Starts for Chocolat_51:

(Start: 10 @39199 has 19 MA's), (15, 39214), (17, 39229), (23, 39274), (26, 39307), (38, 39439), (51, 39520), (55, 39568),

Gene: Chubster_51 Start: 39119, Stop: 39637, Start Num: 10

Candidate Starts for Chubster_51:

(Start: 10 @39119 has 19 MA's), (15, 39134), (17, 39149), (23, 39194), (26, 39227), (38, 39359), (51, 39440), (55, 39488),

Gene: Colucci_51 Start: 38917, Stop: 39447, Start Num: 10

Candidate Starts for Colucci_51:

(Start: 10 @38917 has 19 MA's), (11, 38923), (15, 38935), (17, 38950), (23, 38995), (26, 39028), (30, 39088), (35, 39139), (38, 39160), (40, 39178), (51, 39241), (62, 39391),

Gene: Conboy_51 Start: 39347, Stop: 39865, Start Num: 10

Candidate Starts for Conboy_51:

(Start: 10 @39347 has 19 MA's), (15, 39362), (17, 39377), (23, 39422), (26, 39455), (38, 39587), (51, 39668), (55, 39716),

Gene: CookieBear_79 Start: 44928, Stop: 45362, Start Num: 19

Candidate Starts for CookieBear_79:

(9, 44850), (Start: 19 @44928 has 32 MA's), (36, 45078), (41, 45117), (43, 45129), (63, 45318),

Gene: CosmicBrownie_78 Start: 44683, Stop: 45117, Start Num: 19

Candidate Starts for CosmicBrownie_78:

(Start: 19 @44683 has 32 MA's), (36, 44833), (41, 44872), (43, 44884), (63, 45073),

Gene: Crescenzo_85 Start: 47866, Stop: 48300, Start Num: 19

Candidate Starts for Crescenzo_85:

(Start: 19 @47866 has 32 MA's), (36, 48016), (41, 48055), (43, 48067), (63, 48256),

Gene: DarwinJr_85 Start: 47821, Stop: 48255, Start Num: 19

Candidate Starts for DarwinJr_85:

(Start: 19 @47821 has 32 MA's), (36, 47971), (43, 48022), (55, 48106), (63, 48211),

Gene: Ding_80 Start: 45228, Stop: 45662, Start Num: 19

Candidate Starts for Ding_80:

(Start: 19 @45228 has 32 MA's), (36, 45378), (41, 45417), (43, 45429), (57, 45534), (63, 45618),

Gene: DrYang_52 Start: 41254, Stop: 41784, Start Num: 10

Candidate Starts for DrYang_52:

(Start: 10 @41254 has 19 MA's), (15, 41272), (17, 41287), (23, 41332), (26, 41365), (38, 41497), (40, 41515), (51, 41578), (62, 41728),

Gene: DreamEater_61 Start: 37911, Stop: 38327, Start Num: 22

Candidate Starts for DreamEater_61:

(3, 37740), (5, 37752), (6, 37773), (7, 37782), (18, 37881), (Start: 19 @37905 has 32 MA's), (22, 37911), (30, 38004), (36, 38058), (40, 38094), (44, 38109), (46, 38121), (51, 38154), (58, 38268), (60, 38298),

Gene: EdgarPoe_51 Start: 39347, Stop: 39865, Start Num: 10

Candidate Starts for EdgarPoe_51:

(Start: 10 @39347 has 19 MA's), (15, 39362), (17, 39377), (23, 39422), (26, 39455), (38, 39587), (51, 39668), (55, 39716),

Gene: EvePickles_80 Start: 46710, Stop: 47144, Start Num: 19

Candidate Starts for EvePickles_80:

(16, 46668), (Start: 19 @46710 has 32 MA's), (36, 46860), (41, 46899), (43, 46911), (48, 46935), (55, 46995), (63, 47100),

Gene: Faja_83 Start: 46967, Stop: 47401, Start Num: 19

Candidate Starts for Faja_83:

(1, 46754), (2, 46778), (9, 46892), (Start: 19 @46967 has 32 MA's), (36, 47117), (41, 47156), (43, 47168), (63, 47357),

Gene: GUPitcher_59 Start: 38018, Stop: 38428, Start Num: 20

Candidate Starts for GUPitcher_59:

(Start: 20 @38018 has 2 MA's), (29, 38096), (30, 38120), (31, 38126), (46, 38237), (48, 38246), (50, 38264), (53, 38300),

Gene: Globfish_80 Start: 44618, Stop: 45055, Start Num: 19

Candidate Starts for Globfish_80:

(Start: 19 @44618 has 32 MA's), (36, 44771), (41, 44810), (43, 44822), (48, 44846), (55, 44906), (63, 45011),

Gene: Gorpy_78 Start: 46271, Stop: 46705, Start Num: 19

Candidate Starts for Gorpy_78:

(1, 46055), (2, 46079), (9, 46193), (Start: 19 @46271 has 32 MA's), (36, 46421), (41, 46460), (43, 46472), (63, 46661),

Gene: GumGum_86 Start: 46484, Stop: 46918, Start Num: 19

Candidate Starts for GumGum_86:

(Start: 19 @46484 has 32 MA's), (36, 46634), (43, 46685), (55, 46769), (63, 46874),

Gene: Hestia_74 Start: 43190, Stop: 43624, Start Num: 19

Candidate Starts for Hestia_74:

(1, 42977), (2, 43001), (9, 43115), (Start: 19 @43190 has 32 MA's), (36, 43340), (41, 43379), (43, 43391), (63, 43580),

Gene: Hillester_84 Start: 46339, Stop: 46773, Start Num: 19

Candidate Starts for Hillester_84:

(Start: 19 @46339 has 32 MA's), (36, 46489), (43, 46540), (55, 46624), (63, 46729),

Gene: HumptyDumpty_51 Start: 39217, Stop: 39735, Start Num: 10

Candidate Starts for HumptyDumpty_51:

(Start: 10 @39217 has 19 MA's), (15, 39232), (17, 39247), (23, 39292), (26, 39325), (38, 39457), (51, 39538), (55, 39586),

Gene: Isolde_78 Start: 45144, Stop: 45578, Start Num: 19

Candidate Starts for Isolde_78:

(9, 45066), (Start: 19 @45144 has 32 MA's), (36, 45294), (41, 45333), (43, 45345), (54, 45420), (63, 45534),

Gene: JaNo_51 Start: 39217, Stop: 39735, Start Num: 10

Candidate Starts for JaNo_51:

(Start: 10 @39217 has 19 MA's), (15, 39232), (17, 39247), (23, 39292), (26, 39325), (38, 39457), (51, 39538), (55, 39586),

Gene: JayCookie_51 Start: 39354, Stop: 39872, Start Num: 10

Candidate Starts for JayCookie_51:

(Start: 10 @39354 has 19 MA's), (15, 39369), (17, 39384), (23, 39429), (26, 39462), (38, 39594), (51, 39675), (55, 39723),

Gene: JellyBread_77 Start: 45355, Stop: 45789, Start Num: 19

Candidate Starts for JellyBread_77:

(1, 45139), (2, 45163), (9, 45277), (Start: 19 @45355 has 32 MA's), (36, 45505), (41, 45544), (43, 45556), (63, 45745),

Gene: KBurrousTX_51 Start: 40442, Stop: 40966, Start Num: 10

Candidate Starts for KBurrousTX_51:

(Start: 10 @40442 has 19 MA's), (11, 40448), (15, 40463), (17, 40478), (23, 40523), (26, 40556), (30, 40616), (35, 40667), (38, 40688), (40, 40706), (51, 40769), (56, 40835),

Gene: Kabloowy_81 Start: 46747, Stop: 47157, Start Num: 25

Candidate Starts for Kabloowy_81:

(13, 46672), (14, 46678), (Start: 24 @46744 has 2 MA's), (25, 46747), (36, 46888), (51, 46987), (58, 47101),

Gene: Kabreeze_51 Start: 39217, Stop: 39735, Start Num: 10

Candidate Starts for Kabreeze_51:

(Start: 10 @39217 has 19 MA's), (15, 39232), (17, 39247), (23, 39292), (26, 39325), (38, 39457), (51, 39538), (55, 39586),

Gene: Kukla_61 Start: 37872, Stop: 38264, Start Num: 20

Candidate Starts for Kukla_61:

(8, 37773), (18, 37845), (Start: 20 @37872 has 2 MA's), (31, 37968), (32, 37974), (46, 38079), (48, 38088), (50, 38106), (53, 38142), (59, 38223),

Gene: Kumotta_61 Start: 34491, Stop: 34892, Start Num: 24

Candidate Starts for Kumotta_61:

(Start: 24 @34491 has 2 MA's), (51, 34734),

Gene: Lasker_83 Start: 46923, Stop: 47357, Start Num: 19

Candidate Starts for Lasker_83:

(Start: 19 @46923 has 32 MA's), (36, 47073), (41, 47112), (43, 47124), (63, 47313),

Gene: Lawnathon_82 Start: 45556, Stop: 45990, Start Num: 19

Candidate Starts for Lawnathon_82:

(9, 45478), (Start: 19 @45556 has 32 MA's), (36, 45706), (41, 45745), (43, 45757), (63, 45946),

Gene: LeBruni_83 Start: 45351, Stop: 45785, Start Num: 19

Candidate Starts for LeBruni_83:

(Start: 19 @45351 has 32 MA's), (33, 45468), (43, 45552), (48, 45576), (63, 45741),

Gene: Linus_51 Start: 39340, Stop: 39858, Start Num: 10

Candidate Starts for Linus_51:

(Start: 10 @39340 has 19 MA's), (15, 39355), (17, 39370), (23, 39415), (26, 39448), (38, 39580), (51, 39661), (55, 39709),

Gene: Lymara_51 Start: 39161, Stop: 39691, Start Num: 10

Candidate Starts for Lymara_51:

(Start: 10 @39161 has 19 MA's), (15, 39179), (17, 39194), (23, 39239), (26, 39272), (30, 39332), (35, 39383), (38, 39404), (40, 39422), (51, 39485), (56, 39551),

Gene: MUWow_83 Start: 47292, Stop: 47726, Start Num: 19

Candidate Starts for MUWow_83:

(9, 47214), (Start: 19 @47292 has 32 MA's), (36, 47442), (41, 47481), (43, 47493), (63, 47682),

Gene: Mapleville_76 Start: 44872, Stop: 45306, Start Num: 19

Candidate Starts for Mapleville_76:

(9, 44794), (Start: 19 @44872 has 32 MA's), (36, 45022), (41, 45061), (43, 45073), (63, 45262),

Gene: MargaretKali_57 Start: 33109, Stop: 33510, Start Num: 24

Candidate Starts for MargaretKali_57:

(Start: 24 @33109 has 2 MA's), (51, 33352),

Gene: MaterMagnus_80 Start: 46026, Stop: 46460, Start Num: 19

Candidate Starts for MaterMagnus_80:

(9, 45948), (Start: 19 @46026 has 32 MA's), (36, 46176), (41, 46215), (43, 46227), (63, 46416),

Gene: MidnightRain_86 Start: 47232, Stop: 47666, Start Num: 19

Candidate Starts for MidnightRain_86:

(Start: 19 @47232 has 32 MA's), (36, 47382), (41, 47421), (43, 47433), (63, 47622),

Gene: Mordred_51 Start: 39217, Stop: 39735, Start Num: 10

Candidate Starts for Mordred_51:

(Start: 10 @39217 has 19 MA's), (15, 39232), (17, 39247), (23, 39292), (26, 39325), (38, 39457), (51, 39538), (55, 39586),

Gene: MoyaNatalis_51 Start: 39273, Stop: 39716, Start Num: 23

Candidate Starts for MoyaNatalis_51:

(Start: 10 @39198 has 19 MA's), (15, 39213), (17, 39228), (23, 39273), (26, 39306), (38, 39438), (51, 39519), (55, 39567),

Gene: MurphyJoseph_77 Start: 44408, Stop: 44842, Start Num: 19

Candidate Starts for MurphyJoseph_77:

(Start: 19 @44408 has 32 MA's), (36, 44558), (43, 44609), (55, 44693), (63, 44798),

Gene: NewKitty_82 Start: 47134, Stop: 47568, Start Num: 19

Candidate Starts for NewKitty_82:

(1, 46921), (2, 46945), (9, 47059), (Start: 19 @47134 has 32 MA's), (36, 47284), (41, 47323), (43, 47335), (63, 47524),

Gene: Nyilah_84 Start: 45704, Stop: 46138, Start Num: 19

Candidate Starts for Nyilah_84:

(Start: 19 @45704 has 32 MA's), (36, 45854), (41, 45893), (43, 45905), (63, 46094),

Gene: PetriParty_62 Start: 37816, Stop: 38226, Start Num: 20

Candidate Starts for PetriParty_62:

(Start: 20 @37816 has 2 MA's), (30, 37918), (31, 37924), (46, 38035), (48, 38044), (50, 38062), (53, 38098), (59, 38179),

Gene: Phrank15_84 Start: 46287, Stop: 46721, Start Num: 19

Candidate Starts for Phrank15_84:

(9, 46209), (Start: 19 @46287 has 32 MA's), (33, 46404), (36, 46437), (41, 46476), (43, 46488), (63, 46677),

Gene: PrincessTrina_51 Start: 39341, Stop: 39859, Start Num: 10

Candidate Starts for PrincessTrina_51:

(Start: 10 @39341 has 19 MA's), (15, 39356), (17, 39371), (23, 39416), (26, 39449), (38, 39581), (51, 39662), (55, 39710),

Gene: RadFad_85 Start: 46339, Stop: 46773, Start Num: 19

Candidate Starts for RadFad_85:

(Start: 19 @46339 has 32 MA's), (36, 46489), (43, 46540), (55, 46624), (63, 46729),

Gene: Raphaella_81 Start: 45261, Stop: 45695, Start Num: 19

Candidate Starts for Raphaella_81:

(9, 45183), (Start: 19 @45261 has 32 MA's), (36, 45411), (41, 45450), (43, 45462), (63, 45651),

Gene: Raqqa_78 Start: 45834, Stop: 46268, Start Num: 19

Candidate Starts for Raqqa_78:

(9, 45756), (Start: 19 @45834 has 32 MA's), (36, 45984), (41, 46023), (43, 46035), (63, 46224),

Gene: Richie_83 Start: 47024, Stop: 47458, Start Num: 19

Candidate Starts for Richie_83:

(1, 46808), (2, 46832), (9, 46946), (Start: 19 @47024 has 32 MA's), (36, 47174), (41, 47213), (43, 47225), (63, 47414),

Gene: RosiePosie_51 Start: 39220, Stop: 39738, Start Num: 10

Candidate Starts for RosiePosie_51:

(Start: 10 @39220 has 19 MA's), (15, 39235), (17, 39250), (23, 39295), (26, 39328), (38, 39460), (51, 39541), (55, 39589),

Gene: Sakai_77 Start: 44982, Stop: 45416, Start Num: 19

Candidate Starts for Sakai_77:

(1, 44766), (2, 44790), (9, 44904), (Start: 19 @44982 has 32 MA's), (36, 45132), (41, 45171), (43, 45183), (63, 45372),

Gene: Sashimi_78 Start: 45527, Stop: 45964, Start Num: 19

Candidate Starts for Sashimi_78:

(Start: 19 @45527 has 32 MA's), (27, 45584), (36, 45680), (43, 45731), (63, 45920),

Gene: Satrap_80 Start: 45800, Stop: 46234, Start Num: 19

Candidate Starts for Satrap_80:

(Start: 19 @45800 has 32 MA's), (36, 45950), (43, 46001), (55, 46085), (63, 46190),

Gene: Scavito_51 Start: 39218, Stop: 39736, Start Num: 10

Candidate Starts for Scavito_51:

(Start: 10 @39218 has 19 MA's), (15, 39233), (17, 39248), (23, 39293), (26, 39326), (38, 39458), (51, 39539), (55, 39587),

Gene: Seahorse_88 Start: 50801, Stop: 51235, Start Num: 19

Candidate Starts for Seahorse_88:

(Start: 19 @50801 has 32 MA's), (36, 50951), (43, 51002), (55, 51086), (63, 51191),

Gene: SonDevVon_87 Start: 45926, Stop: 46360, Start Num: 19

Candidate Starts for SonDevVon_87:

(1, 45710), (2, 45734), (9, 45848), (Start: 19 @45926 has 32 MA's), (36, 46076), (41, 46115), (43, 46127), (63, 46316),

Gene: SpicyFrank_82 Start: 45513, Stop: 45947, Start Num: 19

Candidate Starts for SpicyFrank_82:

(2, 45321), (9, 45435), (Start: 19 @45513 has 32 MA's), (36, 45663), (41, 45702), (43, 45714), (48, 45738), (55, 45798), (63, 45903),

Gene: Sporco_82 Start: 46941, Stop: 47375, Start Num: 19

Candidate Starts for Sporco_82:

(1, 46725), (2, 46749), (9, 46863), (Start: 19 @46941 has 32 MA's), (36, 47091), (41, 47130), (43, 47142), (63, 47331),

Gene: Tiff81_76 Start: 44402, Stop: 44836, Start Num: 19

Candidate Starts for Tiff81_76:

(Start: 19 @44402 has 32 MA's), (36, 44552), (41, 44591), (43, 44603), (63, 44792),

Gene: Tophat_51 Start: 39219, Stop: 39737, Start Num: 10

Candidate Starts for Tophat_51:

(Start: 10 @39219 has 19 MA's), (15, 39234), (17, 39249), (23, 39294), (26, 39327), (38, 39459), (51, 39540), (55, 39588),

Gene: TripleJ_62 Start: 38075, Stop: 38479, Start Num: 20

Candidate Starts for TripleJ_62:

(Start: 20 @38075 has 2 MA's), (29, 38153), (30, 38177), (31, 38183), (39, 38249), (45, 38291), (46, 38294), (47, 38297), (48, 38303), (50, 38321), (53, 38357), (59, 38438),

Gene: Vopal_82 Start: 47327, Stop: 47761, Start Num: 19

Candidate Starts for Vopal_82:

(1, 47114), (2, 47138), (9, 47252), (Start: 19 @47327 has 32 MA's), (36, 47477), (41, 47516), (43, 47528), (63, 47717),

Gene: Windest_84 Start: 44509, Stop: 44943, Start Num: 19

Candidate Starts for Windest_84:

(9, 44431), (Start: 19 @44509 has 32 MA's), (36, 44659), (41, 44698), (43, 44710), (63, 44899),

Gene: YoungHarleezy_80 Start: 45534, Stop: 45968, Start Num: 19

Candidate Starts for YoungHarleezy_80:

(9, 45456), (Start: 19 @45534 has 32 MA's), (36, 45684), (41, 45723), (43, 45735), (63, 45924),